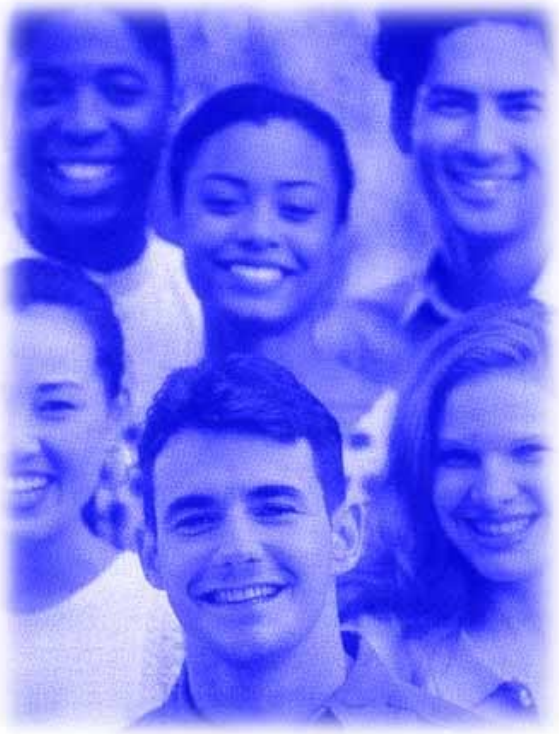
comScore NETWORKS

Collecting & Analyzing Web Usage Data from User Panels

APRIL 2001

comScore Background



- **Massive Panel - 1.5 million people** - for monitoring their total Internet behavior
  - Provides more accurate view of customers' Internet activity
  - Ability to carve out segments based on specific business needs
- **Capture secure customer transactions** across all sites, with proprietary, patent pending technology
  - Sales data provides more complete picture of actual business performance

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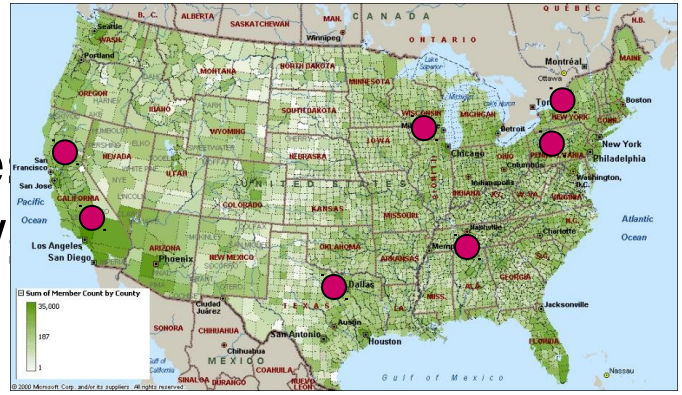
comScore Infrastructure

- 260 servers deployed across 7 hosting locations
- Diversified across 6 backbone
- Sustained bandwidth 400 mb/ (270 T1 Lines)
- 45 TB of storage
- 1.5 billion pages served per month
  - 230% Amazon.com!
- 18 Billion records annually in data warehouse
- Visitors from 246 countries
- Tracking over 1MM sites



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Agenda

- Panel Recruiting Methodology
- Industry Comparisons
- Data Examples
- Private/Public Sector Benefits
- Q & A

Panel Recruitment Methodologies

- **Random Digit Dialing (RDD)**
  - *Recruits panelists entirely through RDD (similar to traditional, off-line market research methods)*
- **Random Direct Mail (RDM)**
- **Multi-Channel**
  - *Incorporates multiple methods to recruit members such as E-Mail, Online Advertising, Random Direct Mail (RDM), and Random Digit Dialing (RDD)*
- **Television Advertising**
- **ISP Partnerships/eCommerce Partnerships**

Data Collection

Client-Side Metering Software

Browser/Proxy Configuration

Client-Side Applet Download

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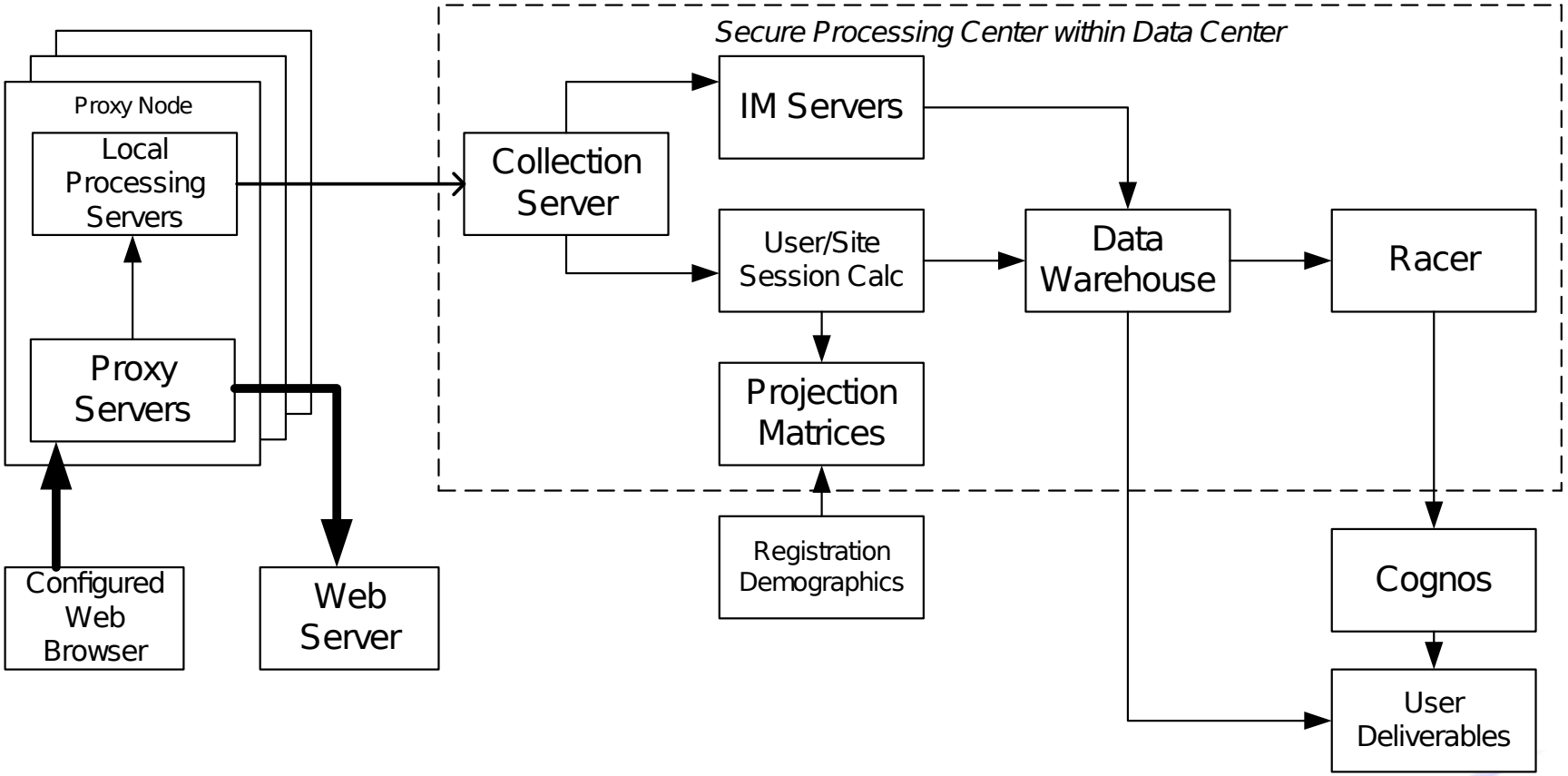
Basic Data Flow



Data Collected

- **Non-secure and secure Internet traffic**
  - *data on panelists' non-secure (http://) and secure (https://) traffic are collected and analyzed (comScore only)*
- **Proprietary service traffic**
  - *data on panelists' traffic on non-World Wide Web content (I.e. AOL proprietary) are collected and analyzed*
- **Client-side applications**
  - *data on panelists' interactions with client-side applications such as Microsoft Office, streaming media, and online chat are collected and analyzed*

Projection Methodology (comScore)

- Interview 1,000 person RDD sample every week to obtain on-line population parameters
- Stratify comScore sample on:
  - geography - household size
  - income - age
  - browser used - ISP
  - number of home,work, school and overseas computers
- Calculate projection weights using iterative proportional fitting
- Adjust weights as necessary using RDD/RDM calibration sample.

Visitor Metrics Reported

- # Unique Visitors
- % Reach
- Visits per Visitor
- Page Views per Visitor
- Page Views per Visit
- Minutes per Visit
- Minutes per Visitor
- Demographics

- Buying Power Index (BPI)
- Transactions
- Click-Through Rates
- Banner Ad Impressions
- Source of Traffic
- Exit Analysis
- Cross Visiting

And others

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Data Reconciliation

Reducing Discrepancies in Audience Estimates From Web Servers and Online Panels

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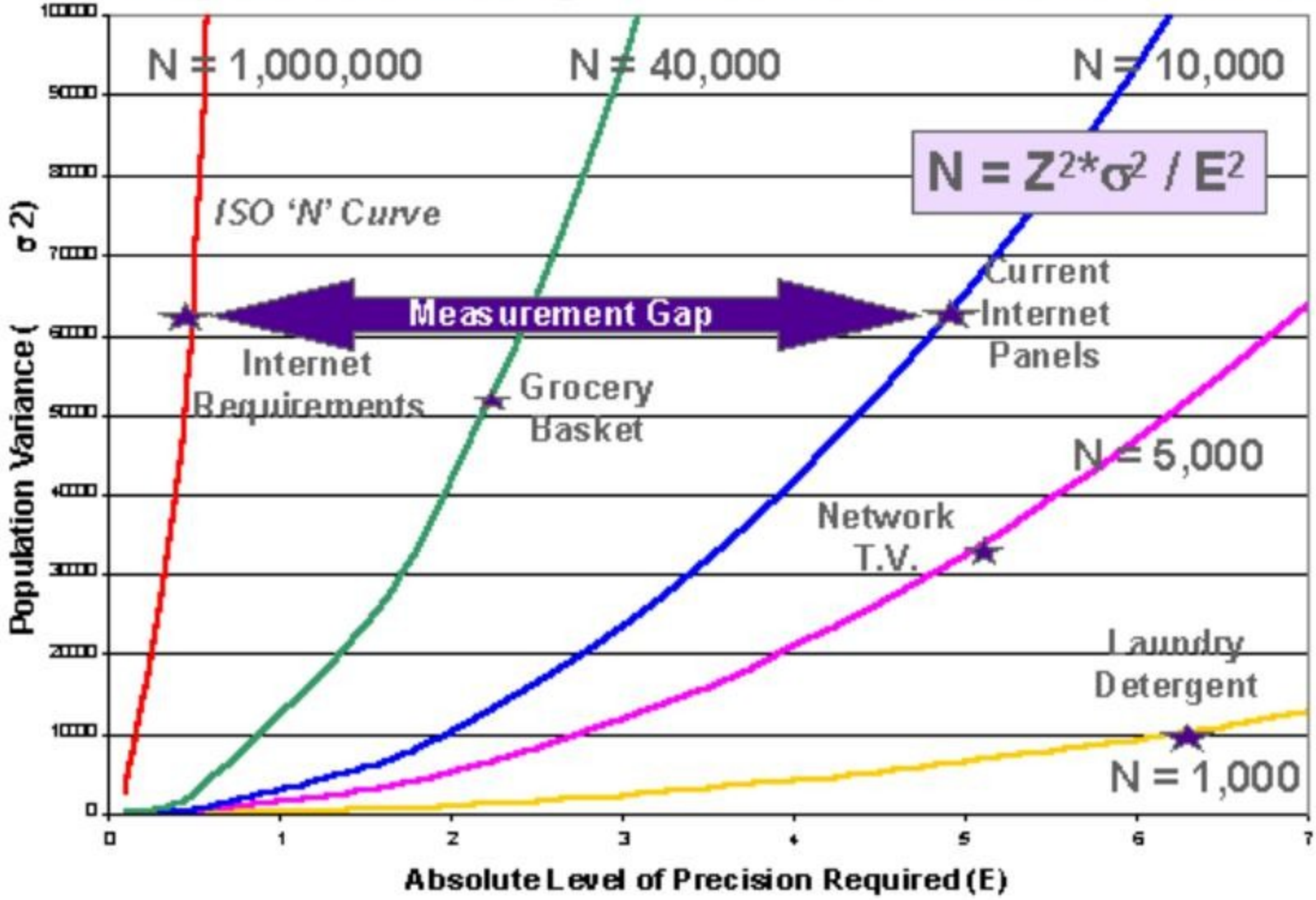
October 4, 1999

IAB / ARF / FAST Summit Measurement Committees

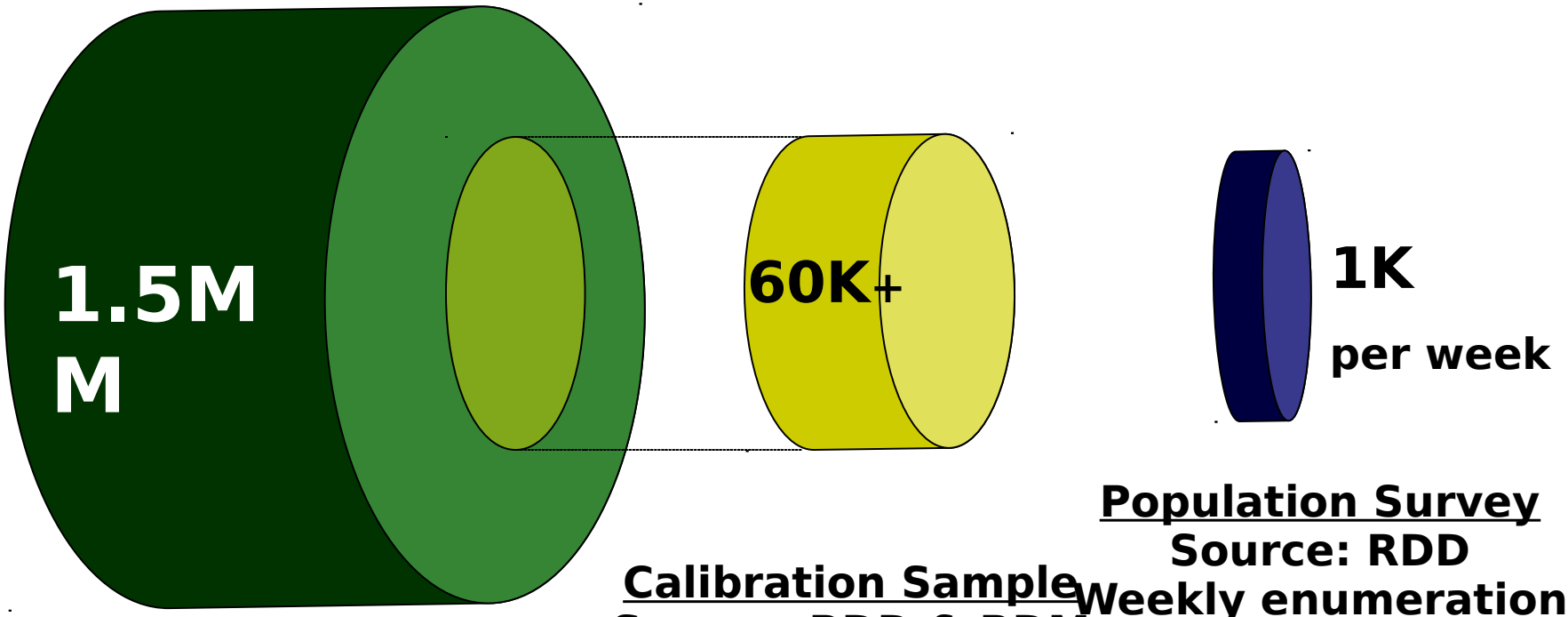
Sample Size Requirements
For Equal Accuracy in Market Measurements



Source: Dreze, Kalyanam and Briggs

Balanced Sample Design

Innovative recruitment provides best of all worlds



Global Network Sample
Source: Web & e-mail
Worldwide reach
Fast & targetable
Cost effective

Calibration Sample
Source: RDD & RDM
Increased purity
Substantial size

Population Survey
Source: RDD
Weekly enumeration
Includes offline households

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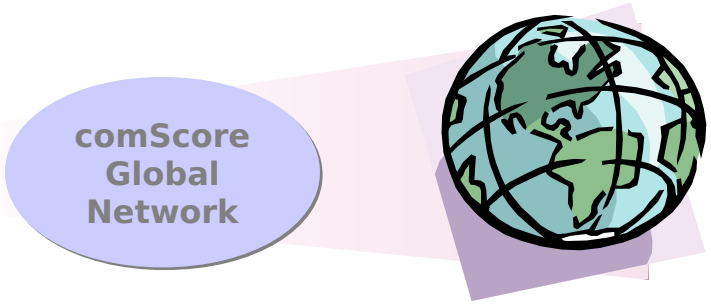
What's Required: Massive Sample Size

Service	Panel Size
comScore Networks	**Over 1,500,000 ACTIVE panelists**
PCData	120,000*
Nielsen NetRatings	70,000*
Jupiter Media Metrix	60,000*

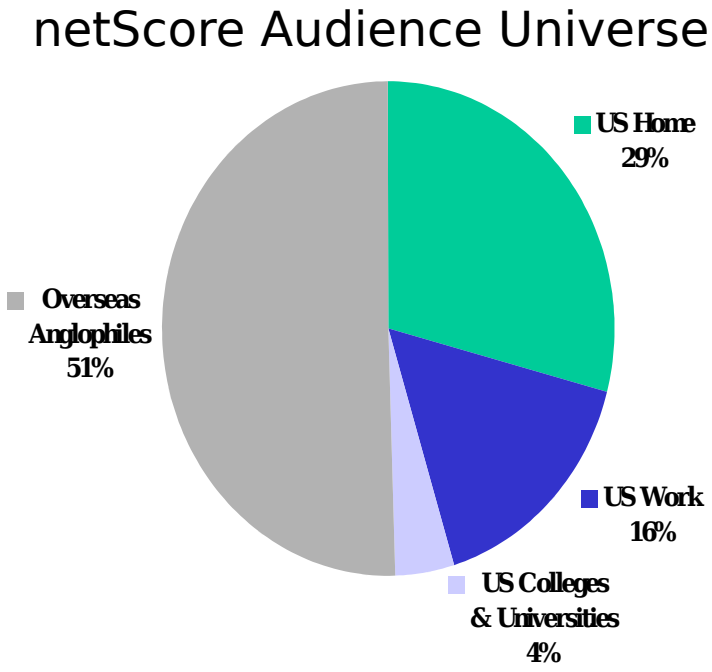
comScore Networks tracks the online buying and surfing behavior of over **1.5 million individuals** – more than 10 times the sample size of any competitor



*Total available panelists, may not all be active (Source: Washington Post, 2/4/01)

What's Required: Robust Audience Segment

- ✓ **At-home U.S.** — Internet-enabled computers located in U.S. homes
- ✓ **At-work U.S.** — computers being used to access the Internet from the workplace
- ✓ **At-school U.S.** — computers used by students at colleges/universities to access the Internet
- ✓ **International** — computers being used to access the Internet by people who have visited English-speaking sites and live outside the U.S



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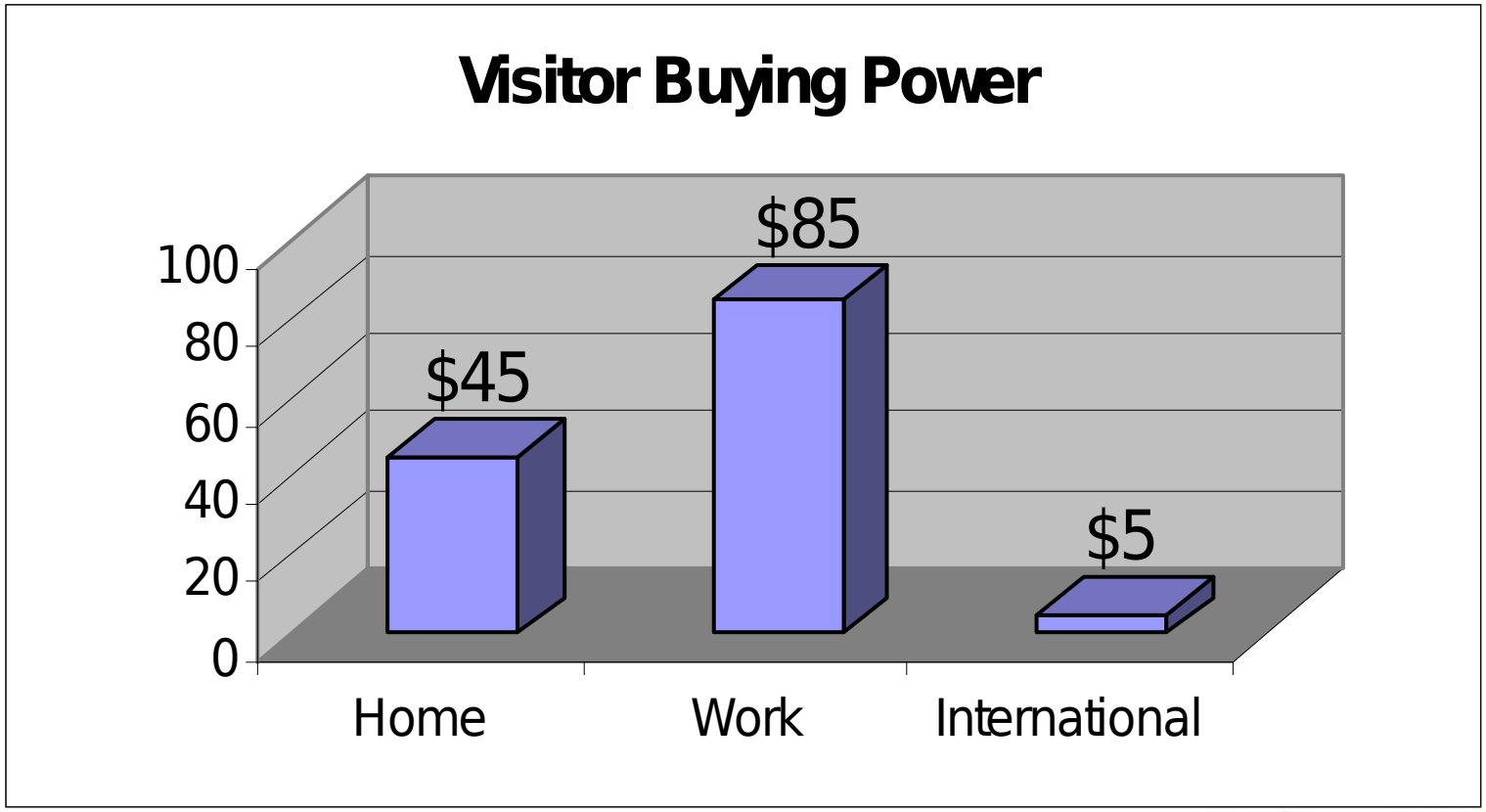
Impact of Machine Location



What's Required: Machine-based methodolo

machine-based measurement methodology accesses and reports results that more closely match your internal log files

Source	**Monthly Unique Visitors (MM) for December 2000**
Yahoo Jan. '01 press release - Worldwide visitor count	181
netScore (Worldwide)	177
netScore (US)	81
Netratings (Home+Work)	59
Media Metrix (Home +Work)	55

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What's Required: Buying Power Metrics

Site A	Site B
# of Unique Visitors:	# of Unique Visitors:
$ Value of Purchases across the Internet:	$ Value of Purchases across the Internet:

comScore provides the only tool to effectively compare the value of Site A versus Site B's audience:

The Buying Power Index (BPI™) Report

The BPI in Practice

Site	Visitor Buying Power
CNN.com	$83
Average Internet User	$53
netScore BPI for CNN.com	**83/53= 157%**

Demographic Report

- **Understand Unique Characteristics of a Site's Audience**
  - Identify Demographic Skews of a Site's Visitor or Buyer Groups
- **Determine Media Buys – Both Off- and Online**
  - Profile Site and Category Buyers to Aid in Media Placement
- **Identify Underdeveloped Markets Compared to Competition**
  - Compare Buyer Segments Where Site is Weak but Competition is Strong

Demographic Composition % of HH	Total Internet	Site A Visitors	Site A Index Total	Site A Buyers	Site A Index Total	Site B Visitors	Site B Index Total	Site B Buyers	Site B Index Total
Income									
Less Than $25K	17%	12%	69	15%	86	18%	103	23%	132
$25,000 - $50,000	37%	26%	70	18%	49	58%	156	44%	118
$50,000 - $75,000	21%	17%	81	19%	92	17%	83	25%	119
$75,000 - $100,000	12%	17%	137	25%	202	4%	32	8%	65
More than $100,000	13%	26%	201	23%	178	3%	24	2%	16
HH Size									
1	9%	15%	175	11%	128	6%	70	9%	57
2	34%	38%	111	41%	120	31%	91	34%	84
3 or 4	42%	40%	94	35%	83	33%	122	37%	129
5 or More	15%	7%	47	13%	88	30%	322	20%	298
Age of Head of HH									
18-29	15%	18%	120	28%	187	10%	67	9%	60
30-39	29%	26%	90	20%	69	29%	100	32%	110
40-49	35%	38%	109	22%	63	33%	94	28%	80
50 and over	21%	18%	86	30%	143	28%	133	31%	148

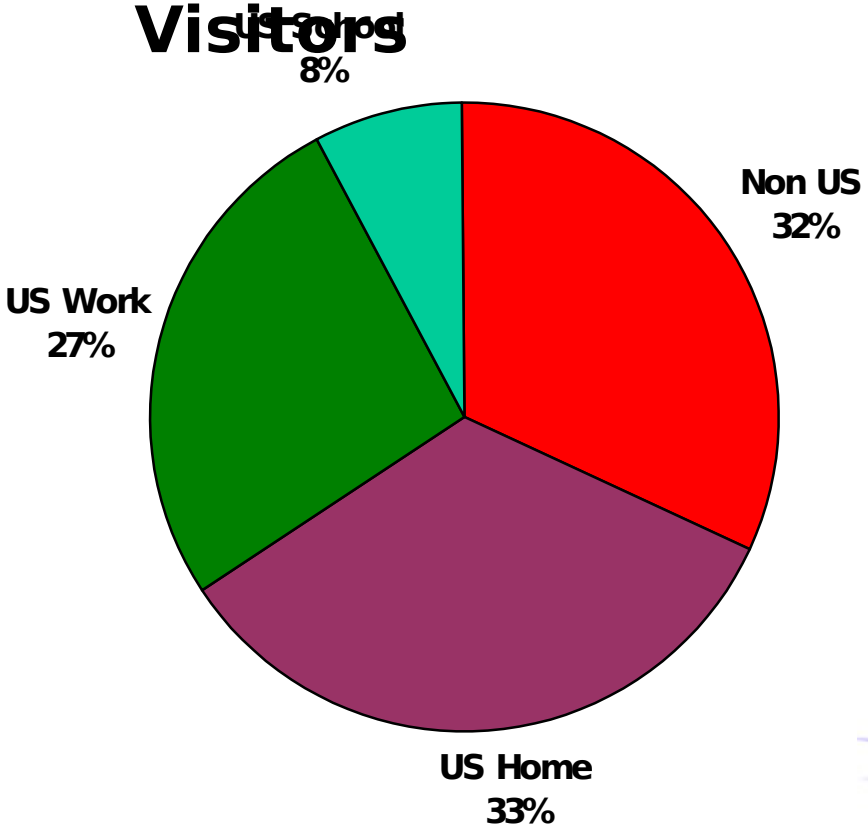
Portal A enjoys a visitor and buyer base with more high income households versus Total Internet

Portal B's Visitors and Buyers are much more likely to come from a large household versus Total Internet

CDC.GOV TRAFFIC ORIGIN

Over 30% of cdc.gov's visitors come from outside the US

1,729,000 Unique Visitors



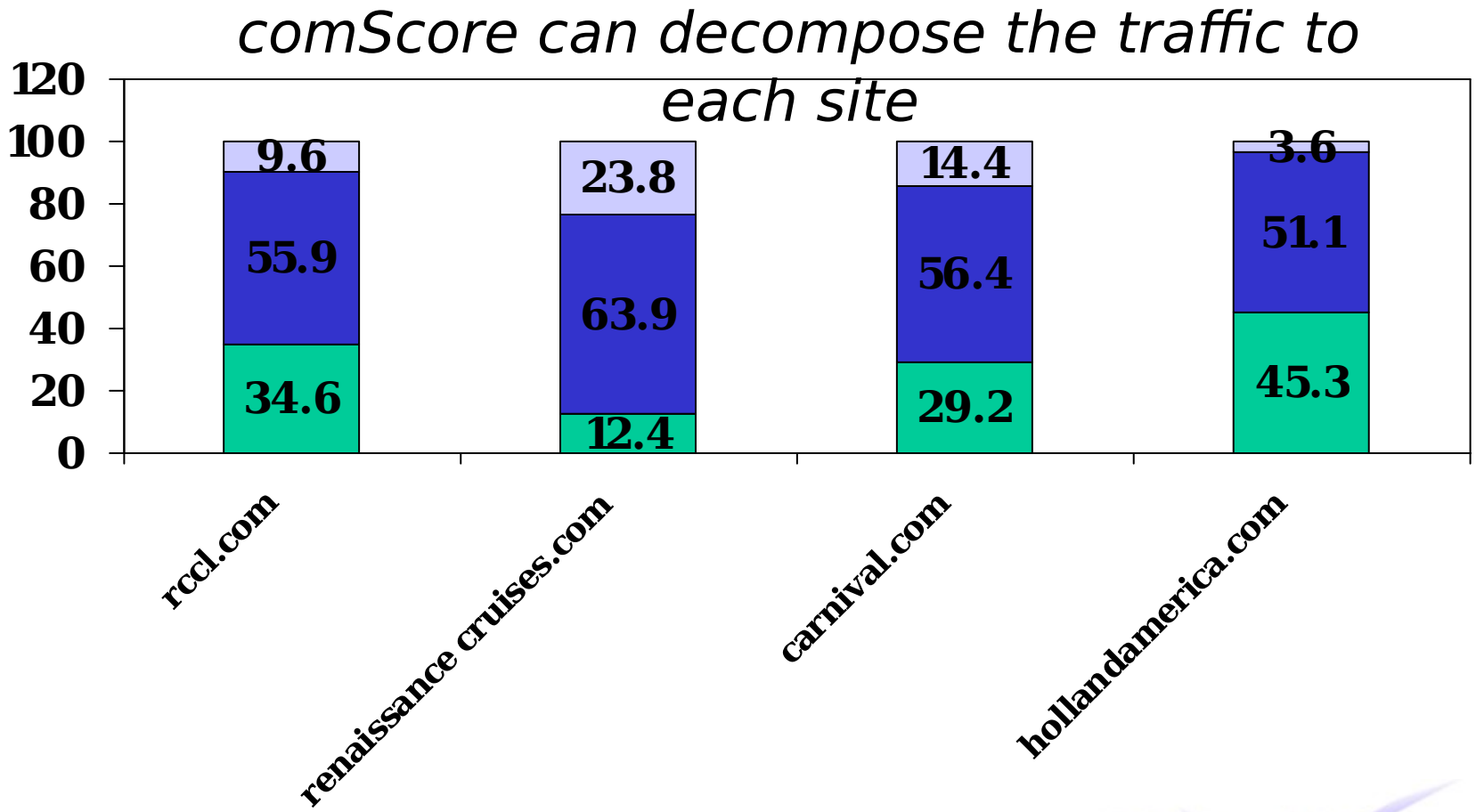
January 2001

CDC.GOV VISITORS ARE ALSO HEAVY VISITORS OF OTHER HEALTH SITES

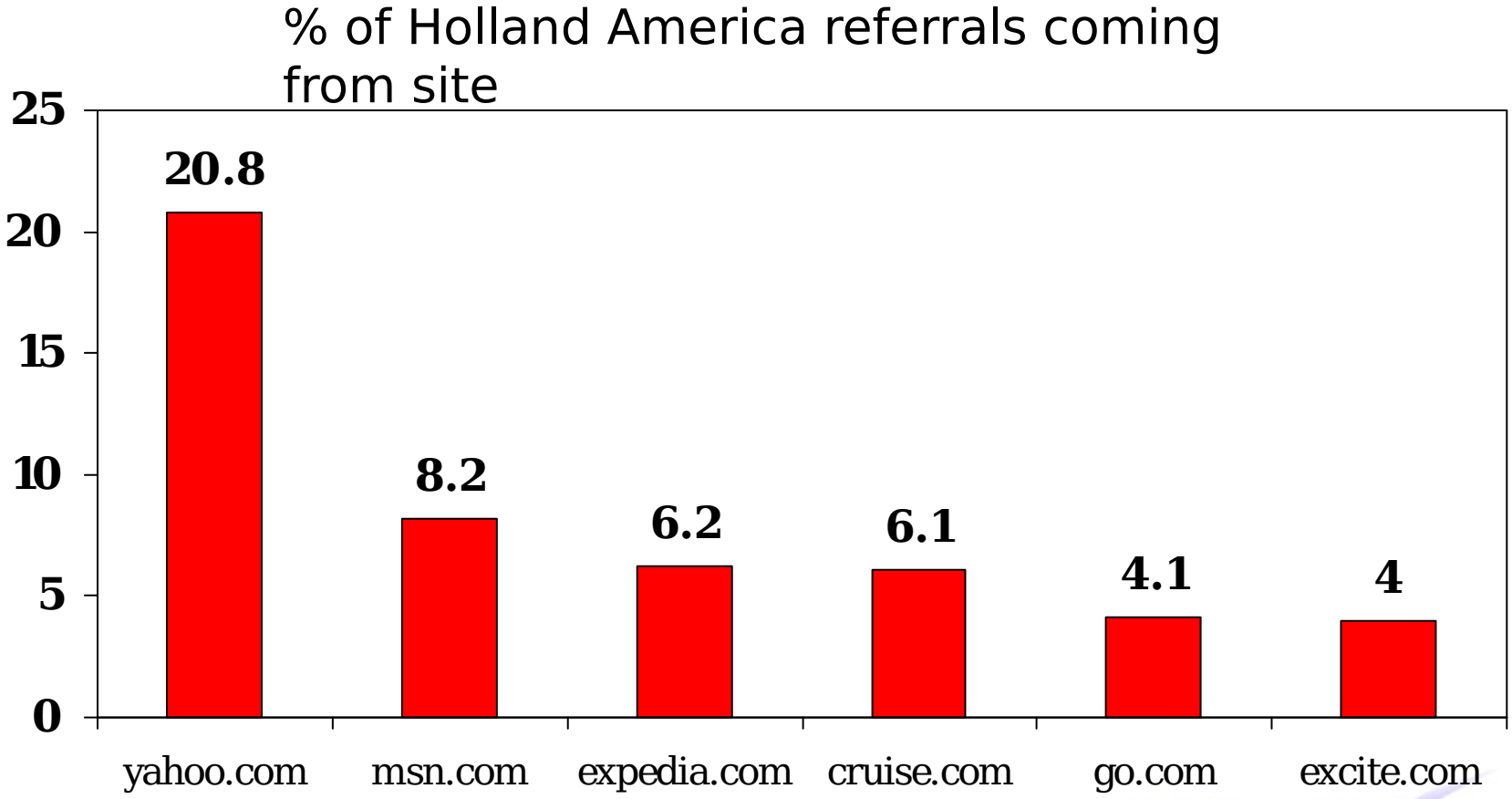
% of audience that also visit a health site

Health Site	CDC Audience	Total Internet Audience	Index
Web MD	24.5%	8.4%	292
NIH.gov	22.1%	2.1%	1052
FDA.gov	6.2%	0.6%	1033
Medscape	6.2%	0.6%	1016
drkoop.com	5.3%	0.8%	663
ama-assn.org	5.0%	0.4%	1250
healthandage.com	4.8%	2.1%	229
healthcentral.com	4.6%	0.8%	575
health.org	4.1%	0.4%	1025
healthlinkusa.com	4.0%	0.3%	1333

Referral Rates by Site Help Determine Brand Strength and Referral Dependencies



Referrals are tracked back to specific sites to evaluate programs



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Private Networks

- Provides in-depth picture of your *relevant population's* on-line behavior anywhere on the web

- Populations can be extracted from the Global Network by specific demographics or by on-line behavior characteristics

- For specialized targets, you can custom-recruit individuals

- You can supplement on-line behavior with survey data to understand on-line and off-line buying habits in addition to psychographic information

Value to the Private Sector

- Competitive Intelligence
  - Availability of traffic and commerce intelligence on competitive businesses
- Marketing and Advertising
  - Understanding where customers are coming from and where they are going creates powerful marketing intelligence.
- Business Development
  - Alliance Opportunities

Value to the Private Sector

- Targeted Research
  - Understanding the behavior of specific segments of the internet community allows you to:
    - ✓ Improve and create new services
    - ✓ Reduce customer attrition
    - ✓ Identify and acquire new customers

Value to the Public Sector

- Economic Measures
  - Impact of e-Commerce on the economy
- e-Gov initiatives
  - How are citizens using the internet to access government information and services?
  - How effective are cross agency portals eg; FirstGov and Access America?
  - Quantify the impact of e-Gov progress in terms of cost savings to your agency and opportunities for collaboration.

Value to the Public Sector

- Productivity
  - How do employees use the internet to do their work? Quantify the impact of web initiatives designed to impact workflow processes.
- Procurement
  - Quantify cross agency/department procurement and leverage information for volume discounts from suppliers and contractors.
  - Quantify the impact of digital exchanges.
- Research and Development
  - Program and service development.
  - Public service recruitment

Web Usage Data from User Panels

Q & A